

PATENT ABSTRACTS OF JAPAN

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(54) NONAQUEOUS ELECTROLYTE BATTERY

(57)Abstract:

PURPOSE: To improve battery characteristics of a nonaqueous electrolyte battery by using as positive electrode active material manganese dioxide in which negative electrode active material such as lithium and sodium is doped by heat treatment under pressure in an aqueous solution of salt of the negative electrode active material.

CONSTITUTION: In comparison with a reference battery B in which distilled water is used in place of lithium hydroxide and another reference battery C in which electrolytic manganese oxide heat treated at a temperature between 350~430°C is used as positive electrode active material, the battery A has improved discharging characteristics. The reason is understood to be that as negative electrode active material is doped in manganese dioxide serving as positive electrode active material, on discharging, in addition to the active material in the negative electrode itself, the negative electrode active material previously doped is diffused in form of iron in the positive electrode, increasing the diffusion rate. When negative electrode active material is doped in such as manganese dioxide serving as positive electrode by heat treatment under pressure in an aqueous solution of salt of the negative electrode active material, water in manganese dioxide which is difficult to remove can be removed, resulting in reduction of residual water.

